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(54) **APPARATUS AND METHODS FOR A SHAPE
MEMORY SPRING ACTUATOR AND
DISPLAY**

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See application file for complete search history.

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(57) **ABSTRACT**

Various apparatus and methods for an actuator and display
using one or more shape memory springs. A shape memory
spring is heated and urges a pin to a first or extended
position. The pin may be supported in the first position by a
supporting mechanism. The shape memory spring is heated
electrically, and in some embodiments under the control of a
processor. The present invention may be used to display
information provided in a user interface from a computer
program, including text, numerical data, and graphical
images.

4 Claims, 12 Drawing Sheets

